

1 PEA/US

CLAIMS

What is claimed is:

1. A system for providing a graphical human-machine interface for a machine having controllable parts, the system comprising:
 - a) computer readable code on a computer readable medium for receiving information about at least one controllable part of the machine from a machine control device in communication with the machine;
 - b) computer readable code on a computer readable medium for triggering a change in at least one assigned property of the at least one graphical object corresponding to the at least one controllable part of the machine; and
 - c) computer readable code on a computer readable medium for rendering and displaying the at least one graphical object following the change in the at least one assigned property, wherein the at least one rendered and displayed graphical object is a scalable vector graphic (SVG) object.
2. The system of claim 1, wherein the computer readable code of a), b), and c) is configured be executed by a computer in communication with the machine control device via wide area network.
3. The system of claim 2, wherein the wide area network is the Internet.
4. The system of claim 1, wherein information received from the machine control device comprises data representative of that selected from the group consisting of: status information, property information, configuration information, error information, alarm information, user information, and combinations thereof.
5. The system of claim 1, wherein the machine control device is selected from the group consisting of: PLC, PCLC, computer with control software, and combinations thereof.

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105A/US

6. The system of claim 1, wherein the at least one graphic object rendered and displayed is viewable with a web browser.

7. The system of claim 1, wherein the at least one graphic object rendered and displayed is a representation of a physical control for the machine.

8. The system of claim 1, wherein the at least one graphic object rendered and displayed is a representation of a part of the machine.

9. The system of claim 1, wherein the at least one graphic object rendered and displayed is capable of being displayed at the same size on displays of different resolutions.

10. The system of claim 1, wherein at the least one assigned property of at least one graphical object is stored in a style sheet.

11. The system of claim 10, wherein style sheet is selected from the group consisting of CSS, XSL, and combinations thereof.

12. The system of claim 1, wherein the computer readable code on a computer readable medium in at least one of a), b) and c) is a compiled software component.

13. The system of claim 1, wherein the computer readable code on a computer readable medium in at least one of a), b) and c) comprises functionality that is callable from and executable on a plurality of operating systems.

14. The system of claim 1, wherein the computer readable code on a computer readable medium in at least one of a), b) and c) is scriptable.

15. The system of claim 1, wherein the computer readable code on a computer readable medium in at least one of a), b) and c) comprises at least one Java Bean component.

16. The system of claim 1, further comprising:

d) computer readable code on a computer readable medium for receiving a user input associated with a displayed graphical object corresponding to the at least one controllable part of the machine;

e) computer readable code on a computer readable medium for triggering a change in at least one assigned property of the associated graphical object in response to user input;

f) computer readable code on a computer readable medium for rendering and displaying the associated graphical object following the change in at least one assigned property in response to use input; and

g) computer readable code on a computer readable medium for sending data to the machine control device, the data representing an instruction to perform an associated machine function.

17. A system for providing a plurality of graphical human-machine interfaces for a machine having a plurality of controllable parts, the system comprising:

a machine control device in communication with the machine;

a first computer in communication with the machine control device via a local area network, the first computer comprising computer readable code for receiving information about at least one controllable part of a machine, the information comprising rendered graphical objects; and

a second computer in communication with the machine control device via a wide area network, the second computer comprising:

computer readable code for receiving information about at least one controllable part of the machine from the machine control device,

PCT/4502, 24522, 22212222

TPEA/US

computer readable code for triggering a change in at least one assigned property of the at least one graphical object corresponding to the at least one controllable part of the machine, and

computer readable code for rendering and displaying the at least one graphical object following the change in the at least one assigned property, wherein the at least one rendered and displayed graphical object is a scalable vector graphic (SVG) object.

18. A system for providing a graphical human-machine interface for a machine having controllable parts, the system comprising:

at least one software component for execution by a computer in communication with a machine control device via a wide area network, the machine control device being in communication with the machine and the at least one software component configured for receiving information about at least one controllable part of the machine from the machine control device;

at least one software component for execution by a computer in communication with the machine control device via a wide area network for triggering a change in at least one assigned property of the at least one graphical object corresponding to the at least one controllable part of the machine;

at least one software component for execution by a computer in communication with the machine control device via a wide area network for rendering and displaying the at least one graphical object following the change in the at least one assigned property, wherein the at least one rendered and displayed graphical object is a scalable vector graphic (SVG) object;

at least one software component for execution by a computer in communication with the machine control device via a wide area network for receiving a user input associated with a displayed graphical object corresponding to at least one controllable part of the machine;

at least one software component for execution by a computer in communication with the machine control device via a wide area network for

triggering a change in the at least one assigned property of the associated graphical object with which the user input is associated;

at least one software component for execution by a computer in communication with the machine control device via a wide area network for rendering and displaying the associated graphical object with which the user input is associated following the change in the at least one assigned property; and

at least one software component for execution by a computer in communication with the machine control device via a wide area network for sending data to the machine control device, the data representing an instruction to perform an associated machine function.

19. A method for providing a graphical human-machine interface for a machine having a plurality of controllable parts, the method comprising the steps of:

receiving information about at least one controllable part of the machine from a machine control device in communication with the machine;

triggering a change in at least one assigned property of the at least one graphical object corresponding to the at least one controllable part of the machine; and

rendering and displaying the at least one graphical object following the change in the at least one assigned property, wherein the at least one rendered and displayed graphical object is a scalable vector graphic (SVG) object.

20. The method of claim 19, wherein the steps of receiving, triggering, and rendering are each performed at a computer configured to receive information from the machine control device via wide area network.

21. The method of claim 19, further comprising the steps of:

receiving a user input associated with a displayed graphical object corresponding to the at least one controllable part of the machine;

triggering a change in at least one assigned property of the associated graphical object in response to user input;

rendering and displaying the associated graphical object following the change in at least one assigned property in response to the user input; and

sending data to the machine control device, the data representing an instruction to perform an associated machine function.

22. A method for providing a plurality of graphical human-machine machine interfaces for a machine having a plurality of controllable parts, the method comprising the steps of:

sending from a machine control device in communication with the machine to a first computer via a local area network information about at least one controllable part of the machine, the information comprising rendered graphical objects;

sending from the machine control device in communication with the machine to a second computer via a wide area network information about at least one controllable part of the machine, the information consisting of non-rendered graphics information;

displaying the received rendered graphical objects at the first computer;

triggering at the second computer a change in at least one assigned property of at least one graphical object corresponding to the at least one controllable part of the machine about which information was received; and

rendering and displaying at the second computer the at least one graphical object following the change in the at least one assigned property, wherein the at least one rendered and displayed graphical object is a scalable vector graphic (SVG) object.

23. The method of claim 22, wherein the wide area network is the Internet.

24. The method of claim 22, wherein the graphical objects displayed at the first computer are GDI+ graphical objects.